RF Exposure

The equipment under test (EUT) is a module with Bluetooth and 2.4G transmitter functions. It is powered by DC 3.3V. The Bluetooth function and 2.4G transmitter can't transmit at the same time. This module is only use for battery-powered products. For more detail information pls refer to the user manual.

Standalone SAR evaluation for BT function

Bluetooth Version: 4.2 (BLE Single mode)
Antenna Type: Integral antenna.
Antenna Gain: 0dBi.
Modulation Type: GFSK
The nominal conducted output power specified: -5dBm (+/-3dB)
The nominal radiated output power (e.i.r.p) specified: -5dBm (+/- 3dB)

The maximun conducted output power for the EUT is -4.70 dBm in the frequency 2480MHz which is within the production variation.

The minimum conducted output power for the EUT is -6.21 dBm in the frequency 2402MHz which is within the production variation.

The maximun conducted output power specified is -2.0dBm = 0.631mW
The source- based time-averaging conducted output power
= 0.631 * Duty factor mW (where Duty Factor$\leqslant$1)
= 0.631mW

The SAR Exclusion Threshold Level:
= 3.0 * (min. test separation distance, mm) / sqrt(freq. in GHz)
= 3.0 * 5 / sqrt (2.480) mW
= 9.53 mW

Since the source-based time-averaging conducted output power is well below the SAR low threshold level, so the EUT is considered to comply with SAR requirement without testing.

Standalone SAR evaluation for 2.4G transmitter function

Antenna Type: Integral antenna.
Antenna Gain: 0dBi.
Modulation Type: GFSK
The nominal conducted output power specified: -2dBm (Tolerance: +/- 3dB)
The nominal radiated output power (e.i.r.p) specified: -2dBm (+/- 3dB)

The maximun conducted output power for the EUT is -2.82 dBm in the frequency 2450MHz which is within the production variation.

The maximun conducted output power specified is 1.0dBm = 1.259mW
The source- based time-averaging conducted output power
= 1.259 * Duty factor mW (where Duty Factor$\leqslant$1)
= 1.259mW

The SAR Exclusion Threshold Level:
= 3.0 * (min. test separation distance, mm) / sqrt(freq. in GHz)
= 3.0 * 5 / sqrt (2.450) mW
= 9.58 mW

Since the source-based time-averaging conducted output power is well below the SAR low threshold level, so the EUT is considered to comply with SAR requirement without testing.